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CIA/RR Project 6-51: Contribution to NIE-33

THE EUROPEAN SATELLITE POWER COMPLEX

PART II
THE ECONOMIC SIGNIFICANCE OF THE SATELLITE COUNTRIES TO THE USSR

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CONTENTS

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Summary

The economy of the European Satellite power complex,* despite many deficiencies, represents a major addition to Soviet strength. Soviet domination over this area is now sufficiently complete to enable the USSR both to utilize its resources and to direct its future economic development.

In exploiting the individual Satellite countries and in planning a longer-term development of the whole area, the USSR is attempting to achieve the following results:

1. Increased Soviet domination and control over the entire area.

2. Increased benefits to the Soviet economy, with particular emphasis on those activities contributing directly to military strength-in-being as well as to war potential.

3. Increased capabilities of the Satellites to contribute to the USSR in wartime.

4. Increased capabilities of the Satellites to conduct localized war within or apart from larger war plans (for example, local military action against bordering states).

In tightening its hold over the Satellites, the USSR has been increasingly successful. Following the conclusion of hostilities in Europe, the USSR actively pursued a policy of crude and essentially unplanned exploitation,

* The European Satellites considered in this paper include East Germany (German Democratic Republic), Poland, Czechoslovakia, Rumania, Hungary, Bulgaria, and Albania. The Soviet Zone of Austria is included only in special instances.

including outright requisition of materials and equipment and imposition of bilateral trade pacts on terms overwhelmingly advantageous to the USSR. These actions were followed and, in part, were paralleled by Soviet measures to gain control over Satellite economies through the management of joint Soviet-Satellite companies in key industries, infiltration of Soviet "advisors" into key plants and government ministries, and general direction over the entire economy through Soviet-controlled political leaders. More recently the Kremlin has turned from its policy of exploitation for immediate gains and has adopted a more long-term and sophisticated policy of exploitation through planned and integrated economic development. This policy--implemented by efforts toward standardization through Satellite pacts of economic collaboration, through trilateral trade deals, and, most important, through the coordinating and planning activities of the Soviet-Satellite Council of Mutual Economic Assistance--will greatly increase the flow of materials to the USSR and will guarantee continued development of the Satellite economies along lines most beneficial to the USSR.

Meanwhile, Soviet domination is sufficiently complete to insure continued Satellite economic support for other Soviet objectives. This support takes the form of (1) military manpower; (2) equipment and materials for use in the USSR; (3) technical and scientific personnel; (4) production of military items for both Satellite and Soviet armies; (5) stockpiles of important commodities; (6) port and rail facilities, warehouses, and airfields; and (7) economic weapons for use in economic warfare against the West.

With about 28 percent of the population and about 4 percent of the area of the Soviet Bloc, excluding Communist China and Communist Korea, the European Satellites produce about 67 percent of the uranium, 34 percent of the electron tubes, 45 percent of the electron lamps, 42 percent of the synthetic ammonia (important in explosives), 76 percent of the carbide, 50 percent of the chlorine, 43 percent of the locomotives, 21 percent of the steel, over 50 percent of the coal (all types), almost 20 percent of the petroleum products, 30 percent of the grain, almost 40 percent of the meat, and a large percentage of many other strategic items (see table in Appendix). With such productive capacity, the Satellites are able to offset, at least partially, Soviet shortages in such important lines as uranium, electronic equipment, and other products of engineering industries, petroleum products, copper, lead, zinc, carbon black, and chemicals for explosives.

The scientific and technical personnel in East Germany and Czechoslovakia, and to a lesser extent in Poland and Hungary, constitute a major contribution to Soviet capabilities. Although relatively few of these personnel have been moved to the USSR, the products of their skill are of major value to the Soviet economy.

The USSR is directing the economic development of the Satellites to insure their even greater contributions and to prepare them for war. Such direction is evidenced by the high percentage of Satellite national income and budgetary allocations taken up by investment and defense expenditures. These expenditures are used to support the expansion of industrial capacity, of the armed forces, and of the production of military items. Included in these expenditures are the accumulation of stockpiles (particularly petroleum and foodstuffs) and the construction of airfields, railroads, transshipment points, port facilities, warehouses, and possibly some underground facilities. All of these efforts are undertaken, at least in part, to improve the strategic position of the USSR. Some of these activities point to preparation for a general war; others, to preparation for local wars not involving the use of Soviet armed forces.

The policy of the USSR in exploiting the Satellites, while vigorously pressing for their long-term development, has put the USSR to some cost. Serious raw material deficiencies, which can be met only by imports from the USSR and the West, have developed in the Satellite area. To meet the very high planned rates of investment, Satellite civilian consumption has been cut back, thus retarding the recovery of living standards to pre-World War II levels, which even then were considerably below Western levels. The cutback in civilian consumption has in turn been accompanied by inflation, which has impaired the efficiency of the Satellite economies and created popular discontent. Forced collectivization has further reduced supplies of civilian goods and has, in addition, stimulated discontent in rural areas. Nevertheless, the things that the USSR supplies to the Satellites—such as iron ore, certain ferroalloys, salt for the chemical industry, and cotton—are not critically short in the USSR. Moreover, imports from non-Bloc sources are largely paid for by Satellite exports to the West. Hence the Satellites are clearly making a net contribution to the Bloc's military potential and will make larger contributions in the future.

In the current East-West campaigns of modified economic warfare there are certain Satellite assets which are useful to the Soviets. The dependence of the West on Satellite exports, particularly foodstuffs and Polish coal, inhibits the West in expanding its program of export controls. Satellite trade channels and contacts provide the USSR with means for circumventing the Western controls that are applied. However, in any economic warfare these Satellite assets are more than offset by Satellite dependence on the West for materials, equipment, and replacement parts. Already the inability to procure imports from the West has retarded Satellite industrial development.

This current Satellite dependence on imports from the West constitutes a serious vulnerability. Inflation, low living levels, and opposition to

collectivization are other weaknesses that the West possibly could exploit to advantage. Also, as the USSR and Satellite economies become increasingly interrelated and interdependent, the effect on the Soviet economic potential of a loss of the Satellites would be more damaging. Nevertheless, the Satellite power complex will continue to represent a major net addition to Soviet strength.

The following discussion of the Satellite power complex examines (1) the devices used by the USSR to control the European Satellite economy, (2) Soviet gains from the Satellites, (3) deficiencies and weaknesses in Satellite contributions, (4) Soviet net gains, and (5) Satellite economic vulnerabilities.

A. Soviet Control Devices.

1. Joint Planning.

Soviet formulation and direction of planning in the European Satellites constitute the most important means by which the USSR assures a growing increment to its war potential from these countries. An increasingly important mechanism through which Soviet control of plan formulation and execution is exercised is the Council of Economic Mutual Assistance (CEMA), the Soviet instrument for directing the economic integration of the Satellites. The Council exercises broad powers over the economies of the Satellite countries, deciding what proportion of effort each member country shall put into the production of raw materials, capital goods, and consumer items; the types of goods to be produced; and the degree to which the economies of the several Satellite countries shall be fused into one interdependent whole. By promoting specialization of production, increasing trade between the various Satellites in items so produced, making the various economies dependent on the USSR for essential materials and markets, and discouraging trade with the West which is not beneficial to the Orbit, both Soviet economic domination and the Soviet military-economic potential are strengthened.

Immediately following the end of hostilities in Europe, the Soviet Union engaged in large-scale looting and indiscriminate exploitation, including requisition of materials, equipment, and bilateral trade terms overwhelmingly advantageous to the USSR. Having gained control in 1947 of Satellite industries by placing Soviet "advisors" in key positions and by establishing part ownership of sectors of the Satellite economies through joint companies, the USSR altered its policy of direct exploitation. This alteration in policy in 1948 has resulted in the adoption of a more long-term, sophisticated program of exploitation through planned and integrated economic development of the Satellite area as a whole.

Measures employed through CEMA include the following: (a) controlling the distribution of resources among the Satellites, (b) integrating national production goals and policing performance, (c) pooling and utilizing foreign exchange and extending credit in order to direct production into lines required for strengthening the Soviet war potential, and (d) some centralized purchasing in the West through agencies set up for that purpose.

Through national and regional plans the USSR sets annual and long-term production schedules and dictates the categories and quantities of goods to be produced by the Satellites. This pattern of control has been increasingly apparent since 1948, when the Soviet Union sharply modified

its policy toward the Satellites from one of looting and short-term exploitation to building up the economy of the area as a whole for long-term exploitation. These national and regional plans, which consistently emphasize the development of heavy industry, are comprehensive in scope and detailed in their provisions for directing all important economic activity.

An increasing portion of the national income of the Satellites is being allocated to capital investment and military production. In Czechoslovakia, over 40 percent of the national investment projected in the Five Year Plan is to be in industry. The planned rate of industrial development is generally high throughout the Satellite area, but Albania, Bulgaria, and Rumania have been unsuccessful in meeting Plan goals for industrialization. East Germany, Czechoslovakia, and Poland, on the other hand, are rapidly expanding their industrial capacity. Polish industry, for example, in 1955 is to account for 60 percent of the national income. Satellite expenditures for military purposes in 1950 equaled on the average roughly 10 percent of national income, and there is evidence that such expenditures in 1951 and 1952 will be even greater.

As part of long-term planning, an over-all economic plan for each Satellite is made annually, with details revised each quarter. Plans for each producing unit include: (a) an estimate of capital needed, listing requirements for investment, renovations, raw materials, depreciation, taxes, and other operating costs; (b) a financial plan, indicating expected income and outlay, as well as profits to accrue to the State treasury; and (c) a distribution and delivery plan, showing the amount of goods to be shipped each quarter and the means of delivery. Manpower needs are related to capacity and productivity of machines and are based on man-hours required for each item.

Coordination of plans at all levels and their integration into Soviet economic plans are assured by Soviet allocation of materials to implement production schedules and by the direct participation of Soviet personnel in Satellite economic activities.

The CEMA structure is part of a wider pattern of Soviet coordination of Satellite economies. It has provided the Soviet Union with an effective instrument for directing all economic activity in Satellite countries through active participation by the governments of those countries. In conjunction with the system of bilateral trade agreements, it facilitates close Soviet surveillance of Orbit production and trade. Its control of credit and foreign exchange permit tight Soviet control over regional allocation of resources and provide in effect a lien on future production of the Satellites for the benefit of the war-making capabilities of the USSR.

2. Trade and Financial Arrangements.

Soviet domination of Satellite finance and foreign trade enables the USSR to realize military-economic gains. In general, loans and credits are extended by the USSR to the more industrialized Satellites, which, in turn, advance loans to the industrially backward Satellites. These loans and credits promote economic development and the exchange of materials along the lines desired by the USSR. The Satellite countries import from the USSR the capital goods and raw materials necessary for industrialization, but the industries developed are those which can contribute most to the economic potential for war of the USSR. For example, the USSR supplies 43 percent of Poland's imports of iron ore and all of Poland's imports of manganese ore. The USSR also supplies 60 percent of Hungary's imports of iron ore, 75 percent of its salt (the key raw material for the chemical industry), and 40 percent of its cotton. A large proportion of the output of industries processing these materials is taken by the USSR in return.

The provisions of the 1950 trade pacts indicate their importance as a device for increasing the Orbit contribution to the Soviet military-economic potential. Among the provisions were arrangements for an increasing flow to the USSR of such raw materials as coal and coke from Poland, petroleum from Rumania, bauxite from Hungary, lead and zinc from Bulgaria, and raw chemicals and uranium ores from East Germany. These agreements also called for accelerated deliveries of industrial equipment from the more industrialized Satellites, including, for example, chemical plants, pumps and compressors, and industrial instruments from East Germany and Czechoslovakia; locomotives and other railroad equipment from Poland; and electrical machinery from Hungary. In some cases, the entire exportable output is taken by the USSR. Soviet exports to the Satellites are aimed primarily at providing the equipment and raw materials needed to produce fabricated goods for export to the Soviet Union. There is every prospect that the pattern developed in the 1950 trade agreements will continue through 1952.

3. Soviet Participation in Satellite Economic Activity.

Production and delivery to the USSR of specified strategic industrial commodities are facilitated through the operation of joint Soviet-Satellite companies which are Soviet-controlled. Such companies control some of the most important sectors of the Rumanian and Hungarian economies, as well as some sectors of the Polish economy. The joint companies also control uranium production in the entire Satellite area. In addition, there are 20 large combines in East Germany solely owned and operated by the USSR.

Where increased production and increased economic separation from the West seem to be advantageous, the USSR encourages the development of an intra-Satellite industrial nexus and of joint industrial development projects. For the "little Ruhr" that is to be developed on the Czechoslovak-Polish border, Czechoslovakia is to furnish industrial equipment, Poland is to provide coal, and both are to contribute manpower. There also is some interchange of electric power on a small scale among the Satellites.

Soviet industrial techniques and the standardization of production along Soviet lines are imposed on the Satellites in varying degrees, with the more highly industrialized Czechoslovakia and East Germany largely excepted. It is not known to what extent Soviet scientific knowledge is being made available in the Satellite area, but it is abundantly clear that Satellite scientific knowledge is being exploited by the Soviets wherever it is to their advantage.

B. Soviet Gains from the European Satellites.

The USSR obtains from the Satellite countries goods, services, and technicians and also utilizes Satellite transportation facilities. Among the most important goods supplied by the Satellites are uranium ores and concentrates, zinc and lead, chemicals, fabricated steel products, petroleum, coal, and industrial equipment, including equipment for the electronics industry. For example, 50 percent of the total annual production of the engineering industries of East Germany, Czechoslovakia, and Hungary is exported to the USSR. A large proportion of petroleum products from the Orbit is being stockpiled for potential military use, and a portion of Satellite agricultural production is set aside for Soviet utilization. Moreover, the USSR obtains various military items, and, with increasing conversion of Orbit industries to military production, this flow will be bigger in 1952.

1. Chemicals.*

The chemical industries in the Satellite area make an important and direct contribution to Soviet war-making capabilities. East Germany, whose plants have been restored to prewar capacity, makes the largest contribution. The Polish coke-chemical industry is making exports to the USSR that constitute a substantial proportion of the chemicals used directly in the Soviet manufacture of explosives. The Czechoslovak, East German, and Polish rubber industries, though dependent on raw materials imported principally from the USSR, export tires, belting, and rubber-coated articles to the USSR. Rumanian shipments of carbon black to the USSR are significant additions to Soviet supplies. Other chemicals of which Satellite production is significant in relation to Soviet output include synthetic ammonia, 71 percent of the USSR's production; nitric acid, 32 percent; and sulphuric

* Quantitative estimates of shipments of chemicals could not be compiled for this paper, nor have chemical production in the Soviet Zone of Austria and shipments to the Soviet Union been included.

acid, 34 percent.

Substantial exports of pyrites go from Albania, Bulgaria, and Rumania to the USSR. As long as the more industrialized Satellites are able to obtain sulphur and pyrites from the West, they will be able to continue to contribute substantially to the Soviet potential by maintaining the flow to the USSR of end-products dependent on these materials, such as explosives and fertilizers.

2. Ferrous Metals.

Although the Satellite area in 1951 and 1952 will probably produce between 6.5 and 7.5 million metric tons of steel, very little will be shipped to the USSR in unfabricated form. However, a considerable proportion of Satellite steel is being utilized by the Czechoslovak and East German engineering industries, which make large shipments of their products to the USSR, as discussed under Engineering Industries (p. 10).

3. Nonferrous Metals.

The Satellites' resources of nonferrous metals are small in relation to requirements. Production of lead, antimony, and baurite, however, almost equals Soviet production, and Satellite output of zinc (107,000 metric tons) exceeds that of the USSR (105,000 metric tons). Despite the fact that production of nonferrous metals is below Satellite requirements, copper, lead, and zinc are exported to the USSR.

4. Uranium.

The Satellites in 1950 supplied approximately 67 percent of the uranium ore and concentrates produced in the Soviet Bloc, with East Germany accounting for 45 percent; Czechoslovakia, 15 percent; Bulgaria, 4 percent; and Poland, 3 percent.

5. Petroleum and Petroleum Products.

Over 50 percent of the petroleum products produced in the Satellites is at the disposal of the Soviets for stockpiling, export, and the supply of Soviet forces in the area. About 4.1 million metric tons of petroleum products refined from the crude were made available to the USSR in 1950 by the Satellites (as compared with Soviet production of 34 million metric tons of petroleum products), and a larger amount will be available in 1952. Certain special petroleum products, however, were shipped from the USSR to various Satellites in 1950.

6. Coal.

The USSR is a net importer of coal. Poland is the only country in the Bloc (the USSR and the Satellite countries combined) with a large surplus. In 1950, Polish exports to all countries amounted to almost one-third of the country's output of bituminous coal and approximately four-fifths of its lignite, amounting to 25 and 4 million metric tons, respectively. Polish coal shipments to the USSR, East Germany, and Czechoslovakia are significant additions to domestic production in those countries. The USSR has been receiving annually from Poland at least 7.5 million metric tons of coal (as compared with the USSR's 1950 production of about 260 million metric tons) and about 0.25 million metric tons of coke (as compared with Soviet production of about 25 million metric tons). Satellite production of coal in 1950, including brown coal and lignite, was 289 million metric tons. The Satellites also produced 5.5 million metric tons of metallurgical coke in 1950.

7. Engineering Industries.

East Germany, Czechoslovakia, and, to a lesser degree, Hungary and Poland are the only Satellite countries that have engineering industries with significant capacities. These countries export to the USSR approximately 50 percent of their total annual production, or an amount equal to about 25 percent of annual Soviet production. Specific items in these shipments, particularly electronic equipment, electric motors, diesel engines, industrial instruments, and machine tools, make a much more important contribution to Soviet industrial-military expansion than is indicated by the percentage figures. Similarly, exports of industrial equipment in short supply, principally from East Germany and Czechoslovakia, to other Satellites increase capacity of the Orbit countries for contributing to the war potential of the USSR. Moreover, Satellite exports to the USSR of military items are increasing in volume as conversion to military production advances.

8. Transportation.

The transportation systems of the Satellites make important indirect contributions to the USSR as carriers of raw materials and industrial products. In military terms, the strategic location of Satellite transportation facilities in the buffer belt between the USSR and the West makes them of great potential importance to the Soviet Union in case of war. An increasing number of railway transloading points have been created in recent years. The waterway and highway systems are of less importance for the movement of traffic and for military operations. Air transport systems throughout the area, particularly the airfield networks, contribute little to the economic potential, being chiefly of strategic military significance.

9. Manpower.

The availability of technical and scientific personnel, particularly from East Germany, has helped to speed production throughout the Bloc. The manpower supply for heavy industry has increased since the war and must continue to rise at a rapid pace to meet economic goals in 1951 and 1952. The total Satellite nonagricultural force in 1950 was 18.02 million as compared with 45.24 million in the USSR. The latter figure includes approximately 10 million slave laborers. Rising levels of military mobilization in the Satellites increasingly limit the availability of industrial manpower. East Germany, Czechoslovakia, Hungary, and, to a lesser degree, Poland are approaching the point of maximum labor availability and utilization. Shortages are soon likely to occur that will retard long-range industrial development. Resort to more coercive measures to increase the industrial labor force and productivity probably would not prove effective. Agricultural collectivization may release some additional manpower for industry and military service, but collectivization is moving slowly because of strong peasant resistance. There is, therefore, little margin for further expansion of the industrial manpower pool.

10. Stockpiling.

Available economic evidence indicates that strategic stockpiling in the Satellite area is limited primarily to the accumulation of petroleum and foodstuffs. In Czechoslovakia, East Germany, and Poland, small stockpiles of the following commodities also are indicated: crude abrasive grains, antifriction bearings, industrial control instruments, special-purpose machine tools for munitions production, industrial diamonds, and diamond cutting tools. These accumulations may be industrial reserves or working inventories rather than stockpiles for emergency. Stockpiling of ferrous and nonferrous metals, tin, rubber, wool, and cotton is not evident and may not exist, since these commodities are in short supply.

There is no evidence that Satellite stockpiling is being integrated into the USSR's stockpiling program. Despite the negative indications of available evidence, it is likely that in 1950 the Satellite countries, following the practice of the USSR, devoted some 6 percent of their gross national product to the building of stockpiles. [redacted] 25X5 25X5

11. Agricultural Products.

In considering agriculture in the Satellites and its contribution to the military-economic potential of the Soviet Bloc, it is necessary to

distinguish between two groups of countries. This distinction is necessary because levels of production for domestic requirements in relation to stockpiles are significantly different in each group and because the agricultural economies of the two groups are not integrated in the sense that surpluses and deficits mutually offset each other.

In the first group of countries, which comprises Czechoslovakia, Hungary, Bulgaria, Rumania, and Albania, there is little evidence of food stockpiling except in Albania, where a small stockpile of grain has been accumulated. Grain production in these countries in 1950 was below requirements because of drought conditions, and a deficit of 0.9 million metric tons is indicated for 1 August 1951. If weather conditions are normal in 1951-52, grain production in these countries is expected to be sufficient to cover requirements and leave a surplus of 0.6 million metric tons.

In contrast, stockpiling of grain in the second group of countries--East Germany and Poland--is extensive. If estimates and plans prove realistic, surplus grain totals in these two countries should be more than 4 million metric tons in 1952. A grain stockpile of 1 million tons in East Germany, which is self-sufficient in grain production, was reported in 1950, and shipments into this area from the USSR of 0.75 million metric tons in 1951 and of 0.80 million tons in 1952 are estimated. Poland produced a grain surplus of 0.7 million metric tons in 1950-51, and a surplus of 1 million tons is expected from the 1951-52 harvests.

Surplus stocks of meat also are considerably more extensive in Poland and East Germany than in the other Satellites. In 1950 a stockpile of 45,000 metric tons of canned meat was built up in East Germany by the USSR. Meat production in Poland in 1950 indicates a surplus of 100,000 metric tons as of 1 August 1951, and the outlook for 1951-52 is for an additional surplus of 130,000 tons. If existing stocks are maintained and supplemented with anticipated production surpluses, supplies in East Germany and Poland may exceed 300,000 metric tons by 1 August 1952. In the first group of countries, on the other hand, meat production provided a surplus for storage of only 28,000 metric tons, and this was attributable to increased slaughtering as a result of the drought. Total meat production in the Satellites in 1950 amounted to 2.2 million metric tons as compared with 3.4 million metric tons in the USSR.

Both groups of countries produce considerable surpluses of sugar, which are exported to the USSR. East Germany and Poland are expected to ship the bulk of a combined surplus of 963,000 metric tons (raw basis) to the USSR in 1951 and 1952. The other group of countries is expected to make a contribution to Bloc sugar supplies of 514,000 metric tons. Satellite sugar production in 1950 was 2.7 million metric tons as compared with 2.1 million metric tons in the USSR.

C. Deficiencies and Weaknesses in Satellite Contributions to the War Potential of the USSR.

The economic value of the Satellite area to the Soviet war potential increases annually as goals for industrial development are attained and as the area is integrated within itself and into the USSR economy. In general, the Satellite area lacks industrial raw materials for the development of a modern industrial economy. It is unlikely that industrial production could be significantly increased in the future by using indigenous resources only. The Satellite area has extremely limited supplies of high-grade iron ore, copper, lead, and zinc. The area has little or no nickel, chromium, molybdenum, vanadium, or tungsten, and almost all cotton, wool, rubber, and tin must be imported. Moreover, only the coal from the Czechoslovak and Polish basins can be made into coke. Other domestic coal is of low quality. The coal and coke shortage could be alleviated to some extent by utilizing water power, but this would involve costly long-term projects, which have not so far been undertaken on a large scale.

Because of the limited exportable surpluses of agricultural commodities, the chief source of foreign exchange, the Satellite countries have not been able to procure all of the equipment essential to extensive industrialization. Financial loans by the USSR on both short and long terms have not filled the need, since the USSR, in view of its own requirements, has allowed the loans to be used for only limited purchases of capital equipment. Moreover, the USSR has not been able fully to utilize its substantial gold reserves for purchases outside the Bloc, either for its interests or the Satellites, because of Western export controls.

Shortages of strategic raw materials in the Satellites result in strict Soviet control and allocation of these commodities among the Orbit countries, such materials being diverted from surplus to deficit areas by Soviet orders. For example, surplus pyrites and sulphur from Rumania, Albania, and Bulgaria are directed to Czechoslovakia and Poland, and exportable surpluses of metallurgical coke in Czechoslovakia and Poland are allocated principally to Bulgaria, East Germany, and Hungary.

The limited industrial development and the shortages of equipment and materials in the Orbit countries, with consequent restrictions on the production of consumer goods, account for living levels that traditionally have been far below current levels in Western Europe and are even somewhat below pre-war levels in Eastern Europe. Furthermore, the postwar redistribution of real income in these countries, which has benefited some groups of industrial and agricultural workers primarily at the expense of the middle and professional classes, is a source of deep discontent, and it has reduced the incentive for

improving the standard of living. Food shortages, aggravated by the drought, developed in 1950, and food rationing was reinstituted in some countries. But the Satellite countries have so far been as successful as the USSR in estimating the minimum amounts of goods and services that must be made available to civilians to maintain them without undue impairment of their productivity.

Inflationary problems are additional indications of difficulties arising from shortages and the emphasis on heavy industry. Strict wage and price controls, forced savings in the form of state loans, the absorption of excess funds through "free stores" (where goods are sold without ration tickets), and turnover taxes (a form of sales tax) are used to balance available supplies of consumer goods against the disbursement of monetary incomes. Moreover, drastic methods for restricting money and credit are readily resorted to, as in the case of East Germany in 1948 and Poland in 1950. Nevertheless, inflation constitutes one of the more important weaknesses of the Orbit economies.

D. Net Gains to the USSR.

Soviet economic-military strength draws increasing net gains from the Satellite countries. Although a statistical evaluation of these gains cannot be made, they can be characterized and listed as follows:

1. The USSR acquires in trade with the Satellites industrial equipment and raw materials the net gains from which, though not adequately measurable in monetary terms, have high strategic value.

2. The Satellites expend economic effort to equip and maintain their own armed forces and to support their civilian industrial economies in the interest of the USSR.

3. Industrial capacity is growing annually through the allocation of a large portion of the national incomes of the Satellites to capital investment, which, in turn, will increase future contributions to the USSR.

4. Satellite resources are used to obtain foreign exchange for the purchase of materials and equipment in short supply in the Bloc.

5. Exports of industrial equipment from the more industrialized Satellites to the less industrialized, particularly from East Germany and Czechoslovakia to other Satellites, greatly increase Satellite capacity to contribute to the war potential of the USSR.

6. An indirect gain accrues to the USSR by virtue of the fact that it obtains materials and equipment from the Satellites at world prices, which are lower than Satellite costs of production.

7. Satellite shipments of military equipment to the USSR are increasing in volume as conversion to military production advances.

8. Soviet use of Satellite skilled personnel fosters USSR military-economic objectives.

9. Soviet utilization of Satellite port facilities, airlines, rail networks, and stockpiles have economic, as well as strategic, significance. Moreover, the USSR is directing the development of these facilities to maximize their value in wartime.

E. Economic Vulnerabilities to Western Measures.

The Satellite countries are economically vulnerable mainly because they are attempting to industrialize at an accelerated rate despite serious deficiencies of raw materials, capital equipment, and technical and managerial skills. With the exception of East Germany and Czechoslovakia, the Satellites either have agricultural economies or are in the early stages of industrial development. The attempt to industrialize rapidly throughout the area by accelerating the development of heavy industry sharply aggravates existing shortages of industrial materials and equipment needed to meet planned outputs and greatly increases current dependence on Western imports, as may be seen in the intensified efforts by all of the Satellite countries to obtain industrial equipment, raw materials, and semifinished goods and spare parts. Western embargoes could substantially reduce production in many Satellite industries unless materials were diverted from the USSR, which is unlikely in view of existing Soviet shortages. The problems of attaining planned levels of production also might be considerably aggravated by Western measures designed to promote inflation, with its disruptive effects. Embargoes on the following commodities would probably have significant results: iron ore, ferroalloys, tin, copper, industrial diamonds, sulphur and pyrites, graphite, mica, asbestos, natural rubber, textile fibers, bearings, abrasives, and spare parts. Additional items on which embargoes might not lower existing production levels but would retard industrial development and reduce capabilities for expanding output are petroleum exploration and drilling equipment; equipment for producing antifriction bearings; complex, automatic machine tools; and precision instruments.

Vulnerability of the Bloc as a whole to Western economic warfare measures derives essentially from the inadequacy of equipment for exploiting, processing, and transporting available resources. When the abundant resources of the USSR are considered together with those of the Satellite area, no basic deficiency in natural resources exists for the Bloc as a whole at present levels of production except in natural rubber, some rare metals, certain nonferrous metals, and natural abrasives. There is, of course, a broader and more serious

vulnerability in the Satellite area alone because of its deficiencies in raw materials and because it does not have first priority on resources available in the USSR. Furthermore, at the current levels of development of the Soviet and Satellite economies, these Satellite resources are the same kind as the Soviet, rather than complementary. Soviet Bloc commodity surpluses and deficits, therefore, tend to cumulate rather than offset each other. Despite the vigorous efforts of the USSR to promote Satellite industrial development and the allocation of some of its own supplies to this end, the extent to which the Soviet Union could and would offset the effects of Western embargoes on the Satellites would be limited.

The principal consequence of a disruption of Soviet Bloc exports would be the curtailing of the means to purchase abroad. Such interference would be particularly damaging to Poland, which is obtaining some of the industrial equipment it needs through its substantial coal exports to Western Europe. Interference with exports also would be somewhat damaging to Czechoslovakia because of its exports of semi-luxury goods to the same area. In these cases, some waste of productive facilities and temporary unemployment would result, but for the most part surpluses formerly exported to the West could promptly be reallocated within the Bloc, although to less advantage than is gained through trade with the West. Financial sanctions would have a very limited effect on the Bloc, because Satellite assets in the West, other than bank balances, are not large. Financial controls would, however, be useful to supplement embargoes.

General vulnerabilities common to the economies of the Bloc include substantial institutional weaknesses and rigidity of operations. The lack of ethnic homogeneity and the existence of national antipathies make economic integration difficult. Imposition of Soviet planning and control methods reduces flexibility and the ability to adjust both to the vicissitudes of normal economic activity and to Western economic warfare measures. There are the further disadvantages of stifled initiative and ingenuity associated with Soviet-type regimentation of the economy.

Vulnerability of the Bloc as a whole, on the other hand, is limited in time and extent. Since currently undeveloped natural resources in the USSR are adequate for a substantial enlargement of the Soviet productive machine, the effectiveness of Western economic warfare depends to a considerable extent on the rate at which the Bloc can develop as an integrated economic unit. The ability to adjust to changing circumstances such as a Western embargo would be a part of this development. Furthermore, centralized direction and control and the ability to carry out industrial development with comparative disregard for civilian consumption levels are advantages that, at least for the short run, may compensate for the weaknesses and rigidities characteristic of the system.

APPENDIX

Production of Selected Commodities by the European Satellites and the USSR
1950

Commodity	Production (Million Metric Tons)		Satellite Production as Percentage of	
	Satellite	USSR	USSR Production	USSR plus Satellite Production
Ferrous Metals				
Iron Ore	3.500	42.000	8.3	7.7
Pig Iron	4.325	19.500	22.2	18.1
Raw Steel	6.775	25.400	26.7	21.1
Metallurgical Coke	5.470	25.500	21.0	10.7
Nonferrous Metals				
Copper	0.050	0.265	18.9	15.9
Lead	0.061	0.095	64.2	39.1
Zinc	0.107	0.105	102.0	50.5
Antimony	0.003	0.005	60.0	37.5
Bauxite	0.600	0.750	80.0	44.5
Aluminum	0.018	0.240	7.5	7.0
Coal				
Hard	100.143	187.150	53.6	34.9
Brown and Lignite	189.230	74.850	253.0	71.7
Petroleum				
Crude Oil	7.230 a/	37.500	19.3	16.2
Petroleum Products	7.600	34.230	22.2	18.2 b/
Synthetics	1.300	1.530	85.0	45.9 c/

a/ Includes the Soviet Zone of Austria.
b/ Includes products from crude, shale, and synthetics.
c/ Includes products from shale and syathetics.

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APPENDIX

Production of Selected Commodities by the European Satellites and the USSR
1950
(Continued)

Commodity	Production (Million Metric Tons)		Satellite Production as Percentage of	
Chemicals	Satellite	USSR	USSR Production	USSR plus Satellite Production
Ammonia (Synthetic)	0.386	0.534	71.0	42.0
Nitric Acid (100%)	0.230	0.715	32.0	24.0
Sulphuric Acid	0.949	2.800	34.0	25.0
Toluol	0.093	0.053	175.0	63.0
Chlorine	0.222	0.218	102.0	50.0
Carbide	0.794	0.250	318.0	76.0
Synthetic Rubber	0.040	0.200	20.0	17.0
Uranium	N.A. d/	N.A. d/	200.0	67.0
Artificial Abrasives	0.017	0.030	57.0	36.0
Agricultural Products				
Grain	36.100	82.000	44.0	30.5
Meat	2.107	3.386	62.0	39.0
Sugar	2.718	2.100	129.0	56.0

d/ Not available for this report.

APPENDIX

Production of Selected Commodities by the European Satellites and the USSR
1950
(Continued)

Commodity	Production		Satellite Production as Percentage of
	Satellite	USSR	USSR Production	USSR plus Satellite Production
Machinery Items a/				
Antifriction Bearings	9,500,000.0	60,000,000 b/	16.0	13.00
Tractors	28,000.0	100,000 b/	28.0	22.00
Machine Tools	31,000.0	74,000 b/	42.0	30.00
Locomotives	2,100.0	2,720 b/	80.0	43.00
Freight Cars	45,800.0	146,000 b/	31.0	24.00
Trucks	12,000.0	428,000 b/	3.0	2.73
Passenger Cars	34,000.0	65,000 b/	52.0	34.00
Heavy Electrical Machinery a/	500.0	1,400	36.0	27.00
Electron Tubes a/	15.0	29	52.0	34.00
Electric Lamps a/	97.0	120	81.0	45.00
Electric Power a/	42.3	85	49.7	33.20

a/ Quantities are calculated on the following basis: machinery items, units; heavy electrical machinery, thousand kilowatts; electron tubes and electric lamps, million units; electric power, billion kilowatt-hours.
b/ Estimated production.
a/ Planned production.